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Application Number: KR 10-2003-0017805

Date of Application: Mar. 21. 2003

Applicant(s): LG Electronics Inc.

COMMISSIONER

[ABSTRACT OF DISCLOSURE]

[ABSTRACT]

The present invention relates to a microwave oven, and more particularly, to a microwave oven having a coffee maker, in which parts can be washed easily for the above coffee maker function.

The microwave oven having a coffee maker of the present invention comprises: a cooking chamber where the food is cooked and forming the out surface; an first housing having a lid rotatably mounted to the edge portion in other portion of the first housing for open/close the inside, a component chamber arranged in a rear portion of the first housing; a water reservoir provided in the upper portion of the component chamber and the other end thereof is projected in front of the first housing; a filter basket provided where the lid is mounted in the upper portion of the front of water reservoir; a water supplying tube for supplying water from the water reservoir to the filter basket is connected to the upper portion of the filter basket; a heater for heating the water inside the water supplying tube, and a container provided in the under portion of the filter basket and dripping coffee liquid from the filter basket.

[REPRESENTATIVE DRAWING/ TYPICAL DRAWINGS]

FIG.3

[INDEX WORDS]

Microwave oven having a coffee maker, filter basket,
water reservoir

[SPECIFICATION]

[TITLE OF THE INVENTION]

MICROWAVE OVEN HAVING A COFFEE MAKER

[BRIEF DESCRIPTION OF THE DRAWINGS]

FIG. 1 illustrates an exploded perspective view showing a conventional microwave oven;

FIG. 2 illustrates an exploded perspective view showing a microwave oven having a coffee maker in accordance with the present invention;

FIG. 3 illustrates a cutaway view showing a coffee maker in accordance with the present invention;

FIG. 4 illustrates a plane cross-sectional view showing a coffee maker in accordance with the present invention; and

FIG. 5a to 5c illustrates plane cross-sectional views showing a process of withdrawing a filter basket and a water reservoir from a coffee maker.

Description of main part in drawings

100: first housing

110: lid

111: supporter	120: bracket
200: cooking chamber	300: component chamber
400: second housing	410: water reservoir
420: filter basket	421: extension member
430: water supplying tube	440: heater
450: container	451: hole
500: filter	

[DETAILED DESCRIPTION OF THE INVENTION]**[OBJECT OF THE INVENTION]****[FIELD OF THE INVENTION AND BACKGROUND OF THE RELATED ART]**

The present invention relates to a microwave oven, and more particularly, to a microwave oven having a coffee maker.

A microwave oven is an apparatus for thawing or heating food by using microwaves (high frequency at 2,450 MHz/sec.) to excite other polarized molecules within the food to be heated.

A general structure of the microwave oven is illustrated in FIG. 1. Hereinafter, the microwave will be in more detail referring to FIG. 1.

Referring to FIG. 1, a conventional microwave oven includes a first housing 10 comprising a front door 11, outer case 12, and exterior frame 13, cooking chamber 20, and component chamber 30.

Here, the front door 11 is formed a front portion of the first housing 10 and a cavity door 14 for opening/closing inside of the cooking chamber 20 are provided.

In addition, the exterior frame 13 forms downward portion and backward portion of the first housing 10 and protects the cooking chamber 20 and component chamber 30 from outer space with the out case 123 and the front door 11.

And, the electric components such as a magnetron 31 and a transformer 32 are provided thereto for irradiating the microwaves into the cooking chamber 20. At the first housing 10, a fan 33 is provided in the cooking chamber 20 for cooling the electric components or for forming air circulation currents in the cooking chamber 20.

Meanwhile, the microwave oven as above thaws or heats the food using microwave only for simply cooking foods.

However, recently in order to improve space utilization, in case of an electric appliance, products performing not only a traditional function but also various functions are requested by consumers.

Particularly, aforementioned microwave oven is not assembled for a variety of functions comparing with the space for components so that research is needed to improve

space utilization.

[TECHNICAL SOLUTION OF THE INVNETION]

An object of the present invention is to provide a microwave oven having a coffee maker in order to solve the above problems.

Another object of the present invention is to provide a microwave oven having a coffee maker with a structure wherein a filter basket assembly and a water reservoir are easily cleaned.

[SYSTEM AND OPERATION OF THE INVENTION]

In order to achieve the objectives, a microwave oven having a coffee maker of the present invention comprises: a cooking chamber where the food is cooked and forming the out surface; an first housing having a lid rotatably mounted to the edge portion in other portion of the first housing for open/close the inside, a component chamber arranged in a rear portion of the first housing; a water reservoir provided in the upper portion of the component chamber and the other end thereof is projected in front of the first housing; a filter basket provided where the lid is mounted in the upper portion of the front of water reservoir; a water supplying tube for supplying water from the water reservoir to the filter basket is connected to the upper portion of the filter basket; a heater for

heating the water inside the water supplying tube, and a container provided in the under portion of the filter basket and dripping coffee liquid from the filter basket.

The present invention is to provide a microwave oven having a coffee maker with a structure wherein a filter basket assembly and a water reservoir are easily cleaned and coffee powder is easily supplied.

Hereinafter, referring to FIG. 2 or FIG. 5, the embodiment of the present invention will be described in detail as follows.

The microwave oven having a coffee maker comprises the first housing 100, the cooking chamber 200, the component chamber 300 provided in the first housing 100, and the second housing 400 provided in other side of the first housing 100.

Here, the above cooking chamber 200 is the object for cooking by microwave and is the same as the cooking chamber 20 of the related art microwave oven.

Also, the above component chamber 300 having a variety of components including a magnetron 310, a transformer 320 etc and located at the rear side of the cooking chamber in the first housing 100.

Here, one end of a lid 110 is rotatably mounted to the front upper portion of the first housing 100, front

portion of the component chamber 300 and the end of the lid 100 is curved to form a front surface of the first housing. Together with this, the supporter 111 is projected in the inner wall of the lid 110.

In addition, the above second housing 400 is devised for dripping coffee including a water reservoir 410, a filter basket 420, a water supplying tube 430, a heater 440, and a container 450.

The water reservoir 410 is for holding water, is square shaped and on opening 411 for supplying water at a top portion thereof, and the side of the front portion, that is, the right edge portion in FIGs including a receiving portion for receiving a part of the filter basket assembly 420.

Here, the water reservoir 410 is located in an upper front portion of the component chamber 300 from the upper portion of the second housing 400, the bracket 120 is inner projected in the both walls (or, on a right wall of the cooking chamber and the right inner wall of the first housing in FIGs.) of the first housing 100 where the under portion of the water reservoir 410 to be withdrawn.

Together with this, a handle 412 is provided on an outer surface of the front portion of the water reservoir 410 for easy grip such that the user can easily withdraw

the water reservoir 410.

And the filter basket 420 is provided at a front portion of the water reservoir 410 in the second housing 400, and a filter 500 is mounted inside thereof.

Particularly, the filter basket 420 is formed with an opened under portion and a wide, circular top and a narrow short tube at the bottom.

In addition, the extension member 421 is recessed in order for the supporter 111 formed in the lid 110 of the first housing 100 on the circumferential surface of the filter basket 420.

As described above, the reason why the filter basket 420 and the water reservoir 410 are arranged in a front-rear direction is that if the structure wherein the container is provided in an upper portion of the filter basket is applied to the related art microwave oven, there will be need to increase the height of the microwave to be a space loss.

Namely, the structure of the coffee maker is applied without expanding the whole height of the microwave oven. And, one end of the water supplying tube 430 is connected to the upper portion of the filter basket 420, and the other end of the other end of the water supplying tube 430 is connected to the water reservoir 410 so that the water

contained in the water reservoir 410 is supplied to the filter basket 420.

Here, the inner portion of the water supplying tube 430 is formed across the under portion of the second housing 500. And, the container 450 is for holding dripped coffee and is provided under portion of the filter basket which is the other side under portion of the first housing 100.

In the mean time, a hole 451 is provided for supplying coffee on the container 450, and such a hole 451 is formed at the right portion of the container 450 where the filter basket 420 discharges the coffee.

And, there is an opened receiving portion for receiving the container 450 under the lid 110 in the first housing 100.

And, the heater 440 is provided under the container 450 and along the around surface connected to the water supplying tube 430 to heat the container 450 and the water supplying tube 430 in need.

Hereinafter, the microwave oven having a coffee maker in an operating state referring to FIG. 5a or FIG. 5c is described as follows.

When a user wants to used the microwave oven having a coffee maker of the present invention for cooking food, the

user puts the food in the cooking chamber 200 and chooses the wanting cooking mode to start cooking.

However, when the user wants to use the present invention for coffee maker, the user withdraws the filter basket 420 out of the first housing 100 and puts the filter 500 in the filter basket 420 as shown in FIG. 5a.

In the mean time, the filter basket 420 is mounted to the inner surface of lid 110 formed in the first housing 100 so that the user rotates the lid 110 to withdraw it referring to FIG. 5b.

If water is short in the water reservoir 410, as shown in FIG. 5c, with the lid 110 opened, the user withdraws the container 410 and supplies water through the opening 411.

It is possible for the container 410 to be guided along the bracket 120 to easily be withdrawn.

And, after reinstalling the container 410 filled with water, the user close the lid 110, and the filter basket 410 mounted to the lid 110 is put inside the front portion.

In the above state, the user turns on for coffee maker, the heater 440 starts to heat the water contained in the water supplying tube 430.

Accordingly, the water rises along the water supplying tube 430 to an opened outward by the steam

pressure and to be supplied to the inside of the filter basket 420.

In the mean time, the water is supplied to the water supplying tube 430 so that heated water is continuously supplied to the filter basket 420.

And water supplied to the filter basket 420 is to be mixed with coffee powder in the filter 500. And, hot water mixed with the coffee powder continues to be flown to the inside of the container 450 provided under portion of the filter basket 420.

Here, coffee liquid supplied to the inside of the container 450 maintains the constant temperature continuously by the heater 440 provided under the container 450.

After completing the dripping coffee through the said process, the filter basket 420 is to be cleaned. so, it remains cleaned by cleaning the contaminated portion by abstracting coffee.

For this, the user may open the lid 110 in front of the first housing 100 and expose the filter basket 420 out of the second housing 400. In this state, the user may move the filter basket 420 upward to remove the extension member 421 from the supporter 111 of the lid 110 and clean the filter basket 420.

[EFFECT OF THE INVENTION]

As described above, the microwave having a coffee maker of the present invention is to extend the utility by adding the function of the coffee maker to the related art microwave oven.

Particularly, the filter basket is separately movable from water reservoir in the present microwave having a coffee maker, so, only the filter basket can be separated from the water reservoir during cleaning the filter basket.

What is claimed is:

1. In order to achieve the objectives, a microwave oven having a coffee maker of the present invention comprises: a cooking chamber where the food is cooked and forming the out surface; an first housing having a lid rotatably mounted to the edge portion in other portion of the first housing for open/close the inside, a component chamber arranged in a rear portion of the first housing; a water reservoir provided in the upper portion of the component chamber and the other end thereof is projected in front of the first housing; a filter basket provided where the lid is mounted in the upper portion of the front of water reservoir; a water supplying tube for supplying water from the water reservoir to the filter basket is connected to the upper portion of the filter basket; a heater for heating the water inside the water supplying tube, and a container provided in the under portion of the filter basket and dripping coffee liquid from the filter basket.

2. The microwave oven having a coffee maker of claim 1, wherein the front portion of the water reservoir is inner projected in order for the filter basket to be recessed.

3. The microwave oven having a coffee maker of claim 1, wherein the extension member is recessed in order for the supporter formed in the lid of the first housing on the circumferential surface of the filter basket.

4. The microwave oven having a coffee maker of claim 1, wherein the bracket is inner projected in the both walls of the first housing for the water reservoir mounted and the water reservoir is to be withdraw like a drawer.

5. The microwave oven having a coffee maker of claim 1, wherein the handle is provided on an outer surface of the front portion of the water reservoir for easy grip such that the user can easily withdraw the water reservoir.